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| 09/848,937 | 05/03/2001 | Jay R. Walton | 010071 | 8488 |

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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

MATTIS, JASON E

ART UNIT PAPER NUMBER

2665

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7

Please find below and/or attached an Office communication concerning this application or proceeding.

One

Office Action Summary

Application No.

09/848,937

Applicant(s)

WALTON, JAY R.

Examiner

Jason E Mattis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4,5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 3, 5-6, 8-10, and 12; 16 and 21; 26; and 33-35 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 19, 34, and 62 respectively of U.S. Patent No. 6493331. Although the conflicting claims are not identical, they are not patentably distinct from each other because of:

With respect to claim 1, "a method for controlling transmissions on an uplink in a communication system", in the application, corresponds to "A method for controlling transmissions in a communications systems" in claim 1 of the patent. "Determining one or more characteristics of the communication system", in the application corresponds to "determining one or more characteristics of the communications system" in claim 1 of the patent. "Partitioning available system resources into a plurality of channels", in the application, corresponds to "partitioning available system resources into a plurality of

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channels" in claim 1 of the patent. "Defining a plurality of back-off factors for the plurality of channels based at least in part on the one or more determined characteristics of the communication system, wherein each channel is associated with a respective back-off factor that identifies a reduction from peak transmit power level, and wherein each back-off factor ranges from zero to one", in the application, corresponds to "Defining a plurality of back-off factors for the plurality of channels based at least in part on the one or more determined characteristics of the communication system, wherein each channel is associated with a respective back-off factor that identifies a reduction from peak transmit power level, and wherein each back-off factor ranges from zero to one" in claim 1 of the patent. "Assigning the plurality of channels to terminals for data transmission at power levels determined based at least in part on the plurality of back-off factors" corresponds to "transmitting on the plurality of channels at power levels determined based at least in part on the plurality of back-off factors" in claim 1 of the patent. The underlined differences between claim 1 of the application and claim 1 of the patent are of the obviousness type. Since the patent discusses controlling transmissions in general, it would be obvious to claim just the uplink transmissions. Also, assigning channels to terminals for transmission is essentially the same as transmitting on the plurality of channels.

With respect to claim 3, "the one or more determined characteristics include loading probabilities for the communication system", in the application, corresponds to "determining one or more characteristics of the communication system, including loading probabilities for the communication system" in claim 1 of the patent.

With respect to claim 5, claim 5 of the application differs from claim 1 of the patent, in that claim 1 of the patent does not disclose “the plurality of back-off factors are defined to approximately match C/I characterization of terminals in the communication system”. Since this limitation is found in another embodiment of the patent, claim 12, it would have been obvious to include the limitation in claim 5 of the application.

With respect to claim 6, claim 6 of the application differs from claim 1 of the patent, in that claim 1 of the patent does not disclose “the plurality of back-off factors are defined based in part on one or more setpoints selected for the plurality of channels, wherein each setpoint corresponds to a C/I required for a particular level of performance”. Since this limitation is found in another embodiment of the patent, claim 3, it would have been obvious to include the limitation in claim 6 of the application.

With respect to claim 8, claim 8 of the application differs from claim 1 of the patent, in that claim 1 of the patent does not disclose “estimating a link margin for each channel”, and “adjusting the plurality of back-off factors based on the estimated link margin”. Since these limitations are found in another embodiment of the patent, claim 19, it would have been obvious to include these limitations in claim 8 of the application.

With respect to claim 9, claim 9 of the application differs from claim 1 of the patent, in that claim 1 of the patent does not disclose “at least one channel is associated with a back-off factor of one, representative of full transmit power, and remaining channels are associated with back-off factor of less than one”. Since this limitation is

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found in another embodiment of the patent, claim 6, it would have been obvious to include the limitation in claim 9 of the application.

With respect to claim 10, claim 10 of the application differs from claim 1 of the patent, in that claim 1 of the patent does not disclose “adaptively adjusting the plurality of back-off factors to reflect changes in the communication system”. Since this limitation is found in another embodiment of the patent, claim 7, it would have been obvious to include the limitation in claim 10 of the application.

With respect to claim 12, claim 12 of the application differs from claim 1 of the patent, in that claim 1 of the patent does not disclose “setting one or more back-off factors to zero for a particular time duration to eliminate interference on one or more associated channels”. Since this limitation is found in another embodiment of the patent, claim 15, it would have been obvious to include the limitation in claim 12 of the application.

With respect to claim 16, “a method for controlling transmissions on an uplink in a communication system”, in the application, corresponds to “a method for controlling transmissions in a communications system” in claim 19 of the patent. “Defining a reuse pattern for the communication system, wherein the reuse pattern includes a plurality of cells”, in the application, corresponds to “defining a reuse pattern for the communications system, wherein the reuse pattern includes a plurality of cells” in claim 19 of the patent. “Determining one or more characteristics for each cell in the communication system”, in the application, corresponds to “determining one or more characteristics for each cell in the reuse pattern” in claim 19 of the patent. “Partitioning

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available system resources into a plurality of channels", in the application, corresponds to "partitioning available system resources into a plurality of channels" in claim 19 of the patent. "Defining a plurality of back-off factors for the plurality of channels for each cell in the communication system based at least in part on the determined one or more characteristics, wherein each channel of each cell is associated with a respective back-off factor that identifies a reduction from peak transmit power level, and wherein each back-off factor ranges from zero to one", in the application, corresponds to "defining a plurality of back-off factors for the plurality of channels for each cell in the reuse pattern based at least in part on the determined one or more characteristics, wherein each channel of each cell is associated with a respective back-off factor that identifies a reduction from peak transmit power level, and wherein each back-off factor ranges from zero to one" in claim 19 of the patent. "Assigning the plurality of channels in each cell to terminals within the cell for data transmission at power levels determined based at least in part on the back-off factors associated with the assigned channels", in the application, corresponds to "transmitting on the plurality of channels from the plurality of cells at power levels determined based at least in part on the associated back-off factors" in claim 19 of the patent. The underlined differences between claim 16 of the application and claim 19 of the patent are of the obviousness type. Since the patent discusses controlling transmissions in general, it would be obvious to claim just the uplink transmissions. Also, each cell in the communication is the same as each cell in the reuse pattern. Also, assigning channels to terminals for transmission is essentially the same as transmitting on the plurality of channels.

With respect to claim 21, “estimating link margins for the channels in each cell, in the application”, in the application, corresponds to “estimating effective link margins for the plurality of channels for each cell in the reuse pattern” in claim 19 of the patent. “Adjusting the back-off factors for each cell based on the estimated link margins”, in the application, corresponds to “redefining the back-off factors for each cell in the reuse pattern based on the estimated effective link margins” in claim 19 of the patent. The underlined differences between claim 21 of the application and claim 19 of the patent are of the obviousness type. The channels in each cell are the same thing as the plurality of channels for each cell in the reuse pattern. Also, adjusting and redefining both mean changing.

With respect to claim 26, “a method for operating an uplink communication system”, in the application, corresponds to “a method for providing data transmissions to a plurality of receiver units in a communication system” in claim 34 of the patent. “Defining a reuse scheme to be used for data transmission by a plurality of terminals, wherein the defined reuse scheme identifies a particular reuse pattern, an initial allocation of available system resources, and a set of operating parameters”, in the application corresponds to “defining a reuse scheme to be used for the data transmissions to the plurality of receiver units, wherein the defined reuse scheme identifies a particular reuse pattern, an initial allocation of available system resources, and a set of operating parameters” in claim 34 of the patent. “Scheduling terminals for data transmission in accordance with the defined reuse scheme”, in the application, corresponds to “transmitting to the plurality of receiver units in accordance with the

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defined reuse scheme" in claim 34 of the patent. "Evaluating performance of the communication system", in the application, corresponds to "evaluating performance of the communication system" in claim 34. "Determining whether the evaluated system performance is within particular thresholds", in the application corresponds to "determining whether the evaluated system performance is within particular thresholds" in claim 34 of the patent. "If the evaluated system performance is not with the particular thresholds, redefining the reuse scheme", in the application corresponds to "if the evaluated system performance is not within the particular thresholds, redefining the reuse scheme" in claim 34 of the patent. The underlined differences between claim 26 of the application and claim 34 of the patent are of the obviousness type. Operating an uplink and providing transmissions to receiver units both refer to transmitting from a base station to a mobile station. Also, terminals in the application and receiver units in the patent are both defined to mean mobile stations. Also, scheduling terminals for transmission and transmitting to receiver units both mean transmitting from a base station to a mobile station.

With respect to claim 33, "a method for scheduling a plurality of terminal for data transmission on an uplink in a communication system", in the application, corresponds to "a method for providing data transmission on a plurality of channels to a plurality of receiver units in a communications system" in claim 62 of the patent. "Prioritizing terminals to be considered for scheduling", in the application, corresponds to "prioritizing the data transmissions" in claim 62 of the patent. "Computing a channel metric for each of a plurality of channels for each terminal", in the application,

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corresponds to “computing channel metrics for the plurality of channels for each receiver unit” in claim 62 of the patent. “Assigning the terminals to the channels based on priorities of the terminals and the computed channel metric”, in the application, corresponds to “assigning data transmissions to the plurality of channels based on priorities of the data transmissions and the computed channel metrics” in claim 62 (**See column 64 lines 11-13 of the patent**). “Selecting a terminal having a highest priority”, in the application, corresponds to “selecting a data transmission having a highest priority” in claim 62 of the patent. “Assigning the selected terminal to a channel having a least favorable channel metric but meeting requirements of the terminal”, in the application corresponds to “assigning the selected data transmission to a channel having a least favorable channel metrics but meeting requirements” in claim 62 of the patent. “Successively assigning remaining terminals, in order of decreasing priority, to remaining unassigned channels”, in the application, corresponds to “successively assigning remaining data transmissions, in order of decreasing priority, to available channels” in claim 62 of the patent. “Receiving transmissions from the scheduled terminals on the assigned channels”, in the application, corresponds to “transmitting on the assigned channels to the plurality of receiver units”. The underlined differences between claim 33 of the application and claim 62 of the patent are of the obviousness type. Scheduling terminals for transmission and providing data transmission to receiver units are equivalent limitations. Also, prioritizing the terminals is equivalent to prioritizing the data transmissions because the priority of the data transmission is the same as the priority of the terminal that the data is being transmitted from. Also, the

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terminals and the receiver units are equivalent elements. Also, selecting terminals and selecting data transmissions are equivalent because the terminals are prioritized based on their data.

With respect to claim 34, “upgrading one or more terminals to unassigned channels having more favorable channel metric”, in the application, corresponds to “upgrading one or more data transmission to available channels having more favorable channel metrics” in claim 62 of the patent. The underlined differences between claim 34 of the application and claim 62 of the patent are of the obviousness type. The terminals and the data transmissions, which are upgraded, are equivalent because each terminal corresponds to a data transmission from that terminal.

With respect to claim 35, “selecting a terminal having highest priority”, in the application, corresponds to “selecting a data transmission having a highest priority” in claim 62 of the patent. “Selecting a channel, from a list of unassigned channels, having a most favorable channel metric”, in the application, corresponds to “selecting a channel, from a list of available channels, having a most favorable channel metrics” in claim 62 of the patent. “Reassigning the selected terminal to the selected channel if the channel metric associated with the selected channel is more favorable than the channel metric associated with the channel currently assigned to the selected terminal”, in the application, corresponds to “reassigning the selected data transmission to the selected channel if the channel metrics associated with the selected channel is more favorable than the channel metrics associated with the original assigned channel” in claim 62 of the patent. The underlined differences between claim 35 of the application and claim 62

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of the patent are of the obviousness type. The terminals and the data transmissions are equivalent because each terminal corresponds to a data transmission from that terminal. Also, the currently assigned terminal and original assigned channel, which corresponds to a terminal, are the same limitation.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Walton et al. (U.S. Pat. 6493331).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claim 1, Walton et al. discloses all the limitations in claim 1 of the patent as discussed in the Double Patenting section above **(See column 55 lines 22-39 of Walton et al.)**.

With respect to claim 2, Walton et al. discloses one or more determined characteristics including characterization of interference on the plurality of channels **(See column 10 lines 33-58 and Figure 4 of Walton et al. for reference to a communications system being characterized including an interference characterization)**.

With respect to claim 3, Walton et al. discloses all the limitations in claim 1 of the patent as discussed in the Double Patenting section above **(See column 55 lines 22-39 of Walton et al.)**.

With respect to claim 4, Walton et al. discloses that the plurality of back-off factors are defined to approximately match the one or more determined characteristics of the communication system **(See column 13 lines 57-63 of Walton et al. for reference to the back-off system scheme is designed to take into account considerations of the characteristics of the users, the loading conditions, the required performance, and so on, where all of these considerations are determined characteristics of the communication system)**.

With respect to claim 5, Walton et al. discloses all the limitations in claim 12 of the patent as discussed in the Double Patenting section above **(See column 57 lines 44-63 of Walton et al.)**.

With respect to claim 6, Walton et al. discloses all the limitations in claim 3 of the patent as discussed in the Double Patenting section above **(See column 55 line 59 to column 56 line 13 of Walton et al.)**.

With respect to claim 7, Walton et al. discloses that the one or more setpoints are determined based in part on data rates of data transmissions on the plurality of channels **(See column 22 lines 13-22 of Walton et al. for reference to a set point or the maximum permitted data rate of the channels)**.

With respect to claim 8, Walton et al. discloses all the limitations in claim 19 of the patent as discussed in the Double Patenting section above **(See column 59 lines 14-35 of Walton et al.)**.

With respect to claim 9, Walton et al. discloses all the limitations in claim 6 of the patent as discussed in the Double Patenting section above **(See column 56 lines 42-61 of Walton et al.)**.

With respect to claim 10, Walton et al. discloses all the limitations in claim 7 of the patent as discussed in the Double Patenting section above **(See column 56 line 62 to column 57 line 12 of Walton et al.)**.

With respect to claim 11, Walton et al. discloses reducing one or more back-off factors for a particular time duration to reduce interference on the associated channels **(See column 20 lines 13-18 of Walton et al. for reference to the back-off factors of offending, interfering, cells being reduced during the period of time a disadvantaged user is communicating)**.

With respect to claim 12, Walton et al. discloses all the limitations in claim 15 of the patent as discussed in the Double Patenting section above **(See column 58 lines 36-55 of Walton et al.)**.

With respect to claim 13, Walton et al. discloses that the system resources are partitioned into a plurality of time division multiplexed time slots and the channels correspond to defined sets of time slots **(See column 12 lines 5-18 of Walton et al. for reference to using a TDM-based scheme where the transmission time is partitioned into time units)**.

With respect to claim 14, Walton et al. discloses that the system resources are partitioned into a plurality of frequency division multiplexed channels **(See column 11 line 63 to column 12 line 4 of Walton et al. for reference to using a frequency division multiplexing scheme with the method)**.

With respect to claim 15, Walton et al. discloses that the system resources are partitioned into a plurality of code division multiplexed channels **(See column 11 line 63 to column 12 line 4 of Walton et al. for reference to using a code division multiplexing scheme with the method)**.

With respect to claim 16, Walton et al. discloses all the limitations in claim 19 of the patent as discussed in the Double Patenting section above **(See column 59 lines 14-35 of Walton et al.)**.

With respect to claim 17, Walton et al. discloses one or more determined characteristics including characterization of interference on the plurality of channels **(See column 10 lines 33-58 and Figure 4 of Walton et al. for reference to a**

communications system being characterized including an interference characterization).

With respect to claim 18, Walton et al. discloses that the plurality of back-off factors are defined based in part on the interference characterization for the cell (See column 13 lines 45-56 of Walton et al. for reference to back-off factors being applied to meet performance requirements while limiting interference).

With respect to claim 19, Walton et al. discloses that each cell in the reuse pattern are approximately staggered from those of neighboring cells in the reuse pattern (See column 15 line 55 to column 16 line 5 of Walton et al. for reference to the back-off factors being staggered in reuse pattern).

With respect to claim 20, Walton et al. discloses adjusting the back-off factors assigned to the channel in each cell to reduce co-channel interference (See column 20 lines 46-57 for reference to back-off channels being modified to reduce interference in other cells).

With respect to claim 21, Walton et al. discloses all the limitations in claim 19 of the patent as discussed in the Double Patenting section above (See column 59 lines 14-35 of Walton et al.).

With respect to claim 22, Walton et al. discloses receiving requests from neighbor cells to reduce the back-off factor and reducing the back-off factor in accordance with the received requests (See column 21 lines 10-24 of Walton et al. for reference to offending cells applying requested back-off factors received from other cells).

With respect to claim 23, Walton et al. discloses partitioning available system resources into a plurality of channels, defining a reuse pattern for the communication system, wherein the reuse pattern includes a plurality of cells and determining one or more characteristics for each cell in the communication system **(See column 59 lines 14-21 in claim 15 of Walton et al. for reference to these limitations being disclosed)**. Walton et al. also discloses allocating channels based on determined characteristics wherein each channel is assigned to a terminal and repeating the determining and allocating to reflect changes in the system **(See column 29 lines 9-50 and Figure 9 of Walton et al. for reference to allocating channels to active users, step 914, with the allocations being based on characteristics for the cell, which are set in step 910, and repeating the determining and allocating, when there is a yes at step 920)**.

With respect to claim 24, Walton et al. discloses that each cell in the reuse pattern is allocated a respective set of channels that includes one or more channels available for transmission at full power level and one or more channels available for transmission at reduced power levels **(See column 16 lines 6-37 and Table 4 of Walton et al. for reference to cells transmitting on different channels, with some channels being at full power and other channels being at reduced power levels)**.

With respect to claim 25, Walton et al. discloses that the set of channels allocated to each cell is determined based in part on estimated loading conditions in the cell **(See column 2 line 59 to column 3 line 2 of Walton et al. for reference to allocating resources to cells based on detected loading conditions)**.

With respect to claim 26, Walton et al. discloses all the limitations in claim 34 of the patent as discussed in the Double Patenting section above **(See column 61 line 49 to column 62 line 4 of Walton et al.)**.

With respect to claim 27, Walton et al. discloses partitioning the available system resources into a plurality of channels **(See column 11 lines 1-12 of Walton et al. for reference to partitioning system resources into channels)**. Walton et al. also discloses allocating a set of channels to each cell based at least in part on the developed interference characterization for the cell **(See column 10 lines 21-32 of Walton et al for reference to defining a reuse scheme, which allocates channels to each cell, based on interference)**.

With respect to claim 28, Walton et al. discloses defining a set of back-off factors to be associated with each of the allocated channels **(See column 11 lines 12-22 of Walton et al. for reference to back-off factors associated with the allocated channel set)**.

With respect to claim 29, Walton et al. discloses receiving a first set of parameters to be used for scheduling terminals for data transmissions **(See column 29 lines 9-50 and Figure 9 of Walton et al. for reference to initially updating the parameters to be used for scheduling, step 910)**. Walton et al. also discloses prioritizing terminals to be considered for scheduling **(See column 29 lines 9-50 and Figure 9 of Walton et al. for reference to users being prioritized and ranked, step 912)**. Walton et al. further discloses scheduling one or more terminals for data transmission based at least in part on the priority of terminals and assigning a channel

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to each scheduled terminal (**See column 29 lines 9-50 and Figure 9 of Walton et al. for reference to users being scheduled and assigned a channel based in part on user priority, step 914**). Walton et al. also discloses updating a second set of parameters used for controlling transmissions by the scheduled terminals (**See column 29 lines 9-50 and Figure 9 of Walton et al. for reference to updating system parameters, step 916**). Walton et al. further discloses receiving one or more transmissions from the one or more scheduled terminals on the assigned channels (**See column 29 lines 9-50 and Figure 9 of Walton et al. for reference to cells transmitting data using the assigned channels and updated parameters, step 918**).

With respect to claim 30, Walton et al. discloses the first set of parameters including characterization of interference on the plurality of channels (**See column 10 lines 33-58 and Figure 4 of Walton et al. for reference to a communications system being characterized including an interference characterization**).

With respect to claim 31, Walton et al. discloses that each scheduled terminal is assigned a channel based on the priority of the terminal (**See column 29 lines 9-50 and Figure 9 of Walton et al. for reference to users being assigned channels based on their priorities, step 914**).

With respect to claim 32, Walton et al. discloses that each scheduled terminal based on load requirements of the terminal (**See column 29 lines 9-50 and Figure 9 of Walton et al. for reference to users being assigned channels based on their demand, load, requirements, step 914**).

With respect to claim 33, Walton et al. discloses all the requirements in claim 62 of the patent as discussed in the Double Patenting section above **(See column 64 lines 4-35 of Walton et al.)**.

With respect to claim 34, Walton et al. discloses all the requirements in claim 62 of the patent as discussed in the Double Patenting section above **(See column 64 lines 4-35 of Walton et al.)**.

With respect to claim 35, Walton et al. discloses all the requirements in claim 62 of the patent as discussed in the Double Patenting section above **(See column 64 lines 4-35 of Walton et al.)**.

With respect to claim 36, Walton et al. discloses a resource allocation processor 1430 to be used for uplink data transmissions by a plurality of terminals, wherein the defined reuse play identifies a particular reuse pattern, an allocation of available system resources to a cell covered by the base station, and a set of operating parameters, wherein the resource allocation processor is further configured to schedule one or more terminals for data transmission and to assign a channel to each scheduled terminal **(See column 51 lines 26-35 and Figure 14 of Walton et al. for reference to resource allocation processor 1430 performing the claimed functions)**. Walton et al. also discloses at least one front-end processor, data processor 1412, configured to process one or more received signals from the one or more scheduled terminals to provide one or more received symbol streams **(See column 51 lines 7-25 and Figure 14 of Walton et al. for reference to data processor 1412 receiving data signals and providing processed modulation symbols to a number of modulators)**. Walton et

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al. further discloses at least one receive processor, channel characterization processor 1440, configured to process the one or more received symbol streams to provide one or more decoded data streams and to estimate one or more characteristics for the cell **(See column 51 lines 36-51 and Figure 14 of Walton et al. for reference to channel characterization processor 1440 processing received samples to determine various characteristics of the received signal and communications link)**. Walton et al. also discloses that the resource allocation processor is further configured to receive channel state information indicative of the one or more characteristics and to schedule terminals and assign channels based on the CSI **(See column 51 lines 26-35 and Figure 14 of Walton et al. for reference to resource allocation processor 1430 receiving information and scheduling terminals and assigning channels based on the information)**.

With respect to claim 37, Walton et al. discloses that the allocated system resources comprises a plurality of channels, and wherein the resource allocation processor 1430 is further configured to determine a plurality of back-off factors for the plurality of channels at least in part on the CSI **(See column 51 lines 26-35 and Figure 14 of Walton et al. for reference to resource allocation processor 1430, which is disclosed to be designed to implement various aspects and embodiments of the invention, which includes back-off factors as shown above)**.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E Mattis whose telephone number is (703) 305-8702. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (703) 305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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RICKY NGO
PRIMARY EXAMINER